DETAILED ACTION

Applicant's amendments and remarks, filed 05/12/2011, are acknowledged.

The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

Status of the Claims

Claims 1-32 and 35 are cancelled.

Claims 33, 34, and 36-54 are pending and under consideration.

Withdrawn Rejections

The rejection of claims 33, 34, 36-44 and 46-54 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement, are withdrawn in view of applicant's arguments, filed 05/12/2011.

Claim Rejections - 35 USC § 112, 1st Paragraph - Maintained

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 45 remains rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

Claim 45 recites "wherein the autologous vaccine is a flu vaccine with cytotoxic activity." No basis has been pointed to for these new limitations and no support has been found in the specification. In the absence of support, these claims and claims dependent thereon are deemed to constitute new matter.

Response to Arguments

Applicant's arguments filed 05/12/2011 have not addressed the rejection of claim 45 for reciting new matter, as discussed above. Therefore, this rejection is maintained for the reasons discussed above.

Claim rejections - 35 USC § 112, 2nd Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 33, 34, and 36-54 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims that depend directly or indirectly from claims 33 and 36 are also rejected due to said dependence.

The following rejections are maintained.

Claim 33, in lines 30-35, recites "implementing into said expert system a process for determining a deferred use protocol comprising biological and technical indications required for cell processing before re-use of a batch of immunocompetent cells...from said subject", which appears to be a method step. However, as the claimed invention is directed to a device, the recitation of an apparent method step renders the claim

confusing. It is unclear whether applicant intends this limitation to be a further limitation of said device, and if so, what structural limitation is intended? For example, what device implements data into said expert system? Clarification is requested.

Claims 33 and 36, in the last 8 lines, recite "determining parameters..., using data stored in said database, said determined parameters including optimized proportions...for better tolerance...and greater reaction speed, using the subject's immunity data stored in the database." The use of two separate "using" phrases makes it unclear what data is used for determining parameters. For example, one interpretation of the claims is that parameters are determined using ANY of the data stored in said database. However, a second interpretation is that parameters are determined using the immunity data stored in the database. Which is it? Clarification is requested.

Response to Arguments

Applicant's arguments filed 05/12/2011, on pages 16-18, discuss the interpretation of "deferred use protocols" but do not address any of the issues set forth above, under 35 USC 112 2nd paragraph, and these issues have not been corrected in the amendment filed 05/12/2011. Therefore, these rejections are maintained for the reasons discussed above.

The following rejection is necessitated by amendment.

Amended claim 41 recites "checking annihilating antibodies....". It is unclear whether this phrase is intended to be a step for "checking" annihilating antibodies or is a step for "annihilating" antibodies. If the former is intended, it is unclear what is being

"checked" for; e.g. the presence of antibodies or something else. Clarification is requested.

Claim Rejections - 35 USC § 103 - Maintained

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 33, 36, 37, 38, 39, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lefesvre et al. (WO/1999/053030; Publication Date: 10/21/1999, p.1-5; English translation version), in view of Winkel (Clinical Chemistry, 1989, 35/8, p.1595-1600), and in view of Adrion et al. (US 5,023,785; Issue Jun. 11, 1991; IDS filed 09/16/2010).

The instant claims are drawn to a system and method for managing batches of immunocompetent cells collected from human or animal subjects for their deferred use. For purposes of examination, the components of the system include a storage device, collection device, and a status-characterizing device to determine identity data. The status-characterizing device comprises an expert system that uses biological items and applies a set of rules stored in a knowledge base, a cell management processor for storing identity data, an identification device for performing identification of batches, and a processor for processing successively collected subject identity data.

The claimed method, as best understood, requires collecting plural immunocompetent cells for successive collection stages, storing the collected cells, creating a personal cell library from successively collected cells and personal database comprising status characterization data and subject identity data, generating subjects' identity data using an expert system, determining a deferred-use protocol comprising biological and technical indications required for cell processing before re-use of previously collected cells, determining parameters for said deferred-use protocols including optimal proportions of various selected types of cells for better tolerance by said patient and greater reaction speed, extracting selected immunocompetent cells

from said personal library, and processing said extracted immunocompetent cells according to said deferred-use protocol.

Lefesvre teaches a batch management method and system for managing immunocompetent cells (e.g. lymphocyte cells) obtained from human subjects [p. 1, ¶1].

Regarding claim(s) 33 and 36, Lefesvre teaches storage sites for storing and preserving batches of immunocompetent cells, e.g. lymphocytes, for deferred use [p.2, ¶7, ¶8, p. 3]. Lefesvre teaches processing centers for communicating with storage sites, producing a personal library of lymphocyte cells, which inherently store immunity information, and identifying stored batches of cells in response to requests for treatments using said cells [p.3, ¶1, See also p.2, ¶ 2, p.4, ¶ 4]. The personal library of immuno-qualified cells are taken from successively collected cells and stored in a processing center [p.2¶2], which is interpreted as a personal cell library. The library contains personal data relating to the subject (i.e. subject identity data), cellular identification data, immunity related information, and gene therapy protocol information [p.2, ¶8, p.2, ¶ 12, Fig. 1, p.3, p.4, ¶5]. With regards to the limitation of data "resulting from successive status characterization", Lefesvre teaches processing of blood to collect information indicative of patient health status [p. 1 and Fig. 1, p.3, ¶ 9], which shows a status characterization step of collecting information. However, applicant is reminded that the nature of the data, per se, has no limiting effect on the claimed method.

Lefesvre does not specifically teach an expert system for generating a subject's identity data. However, Lefesvre suggests this limitation by teaching an automated

processing center that contains personal data relating to the subject (i.e. subject identity data) [p.2, ¶8, p.2, ¶ 12, Fig. 1, p.3, p.4, ¶5], and because the entire processing system is controlled using software [p.3, ¶1, See also p.2, ¶ 2, p.4, ¶ 4].

Lefesvre does not specifically teach implementing (into an expert system) deferred use protocols comprising biological and technical indications required for cell processing. However, Lefesvre suggests this limitation by teaching a **cellular re-use processing center** that implements deferred use protocols, such as defrosting immune-qualified cells collected from patients and re-using them by injecting them into as patients as therapeutic treatment [p. 2, ¶6, ¶8], which is a technical indication required for processing. Therefore, Lefesvre makes obvious implementing deferred use protocols comprising biological and technical indications required for cell processing into an expert system.

Lefesvre teaches deferred use protocols, such as defrosting immune-qualified cells collected from patients and re-using them by injecting them into as patients as therapeutic treatment [p. 2, ¶6, ¶8], as discussed above, which is a teaching for the claimed prescription of a re-use process of cells for a subject.

Lefesvre does not specifically teach determining parameters for deferred use protocols using data stored in a database. However, Lefesvre suggests this limitation because the processing center for managing cellular and personal data requires transferring data and **parameters** associated with all of the stored information, which includes batch data collected at the time of re-use [p.4, ¶4, ¶6].

Lefesvre teaches selecting and removing cells from a personal library according to deferred use protocols and provides components for re-using lymphocytes in the patient [p.4, ¶ 2, and p.4, ¶7 onwards], which shows extracting immunocompetent cells and processing them according to deferred use protocols.

Regarding claim(s) 37, Lefesvre teaches processing of blood to collect information indicative of patient health status [p. 1 and Fig. 1, p.3, ¶ 8, ¶9], which shows a status characterization step of collecting information. However, applicant is reminded that the nature of the data, per se, has no limiting effect on the claimed method. Lefesvre additionally teaches methods for condition and preserving cells, and a library of cells containing the sum of immunity information [p.2, ¶2].

Regarding claim(s) 38, Lefesvre teaches the batch storage of cells in accessible and identifiable form for deferred use protocols which include gene therapy protocols, and cellular immunity restoration protocols [p.2, ¶6, p.2, ¶ 12, p.4, ¶8, p. 3].

Regarding claim(s) 39, Lefesvre teaches cryogenic storage sites for storing and preserving batches of immunocompetent cells, e.g. lymphocytes, for deferred use [p.2, ¶7, ¶8, p. 3].

Regarding claim(s) 43, Lefesvre provides a database that can be queried by a user to obtain information [p.3, last ¶]. Lefesvre teaches protocols for performing identification of cells and consulting a cell management database system [p.3, ¶1-¶3, p.4, ¶1], receiving requests for subject identity data [p.3, last ¶], and processing of the database based on patient specific requests [p.4, last ¶, p.4]. The system is also

capable of selecting appropriate cells using information from a database [p.3, last two ¶s].

Lefesvre does not teach an expert system that applies a set of rules stored in a knowledge base, as in claims 33 and 36.

Lefesvre does not teach parameters of a deferred use protocol that include optimal proportions of various selected cell types from the personal cell library using the subject's immunity data, as in claims 33 and 36.

Winkel teaches expert systems using rules for producing diagnostic results and treatment recommendations; see p.1596, and p.1597, Col. 1. The system is applied to clinical laboratory data and can be used with other various types of laboratory data stored in databases; see Figure 1 and Table 1.

Adrion teaches an expert system for determining clinically important parameters (i.e. optimal parameters) related to hematology data stored in a database; see Ref. claims 1, 4, and 5. The parameters can include a plurality of different types of cells including lymphocyte/monocyte ratio amounts; see Ref. claims 1 and 4, which is interpreted as portions of cells.

It would have been obvious to someone of ordinary skill in the art at the time of the instant invention to have modified the cellular re-use processing center of Lefesvre to include an expert system that applies a set of rules stored in a knowledge base, since Lefesvre already teaches a software-based management system that provides deferred use protocols [p.2, ¶6, ¶8, p.4, last 2 paragraphs], and since one skilled in the art would recognize that rule-based expert systems, such as those taught by Winkel, could be

predictably applied to any clinical data for the benefit of providing automated consultation for improved treatment or deferred use recommendations, as suggested by Winkel [p.1595, Col. 1].

It would have been obvious to someone of ordinary skill in the art at the time of the instant invention to have modified the cellular re-use processing center of Lefesvre by including a processor for determining parameters that include optimal proportions of various cell types using the subject's immunity data, since Lefesvre already teaches **parameters** associated with all of the stored information, including cellular batch data, as discussed above, since Lefesvre already teaches using specific amounts of immuno-cells for re-use [p.2, ¶6], which suggests optimal portions of cells, and since Adrion teaches automated tools for determining and storing optimal parameters related to different types of blood cells, as set forth above. The motivation would have been to improve re-use protocols, as taught by Lefesvre, using clinically significant aliquots (i.e. optimal proportions) of selected cells, as suggested by Lefesvre [p.2, ¶6,, and p.3, last two ¶].

Claims 34 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lefesvre et al. in view of Winkel, and in view of Adrion et al., as applied to claims 33, 36, 37, 38, 39, and 43, above, and further in view of Zanin et al. (WO/1997/045056; Publication Date: 12/4/1997), and in view of Cha et al. (Physiol. Meas., 1994, Vol. 15, p. 129-137).

Lefesvre, Winkel, and Adrion make obvious a method and system for managing batches of immunocompetent cells for deferred use, as set forth above.

Lefesvre, Winkel, and Adrion do not teach a device for collecting bioelectronic information resulting from processing measures as in claims 34 and 40.

Zanin teaches a method and device for measuring, processing, and storing bio-electrical signals [Abstract, p.2, Fig. 1, p.6]. Collected and processed information includes parameters and data relating to various measured levels including pH [p.9, last ¶]. In addition, Zanin also teaches an expert system comprising control and interpretation software to provide the physician with tools for determining patient health status and reliable treatments [Abstract, p.3, Ref. claims 3 and 5].

Cha teaches a routine method for obtaining bioelectronic information by processing previously collected patient blood samples. The information includes resistance (i.e. resistivity) and reactance data [Abstract, Fig. 1, Section 3].

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to have provided a predictable variation of the type of data and devices used, such as bioelectronic data and devices, in the system and method made obvious by Lefesvre, Winkel, and Adrion, with a reasonable expectation of success, in view of the prior art of Zanin and Cha, who perform processing bioelectronic data using expert systems, and in view of the rationale for a *prima facie* case of obviousness provided by the Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398 (2007). See MPEP 2143. In this case, the rationale would have been to explore methods for improving patient care based on variations of known design incentives, such as

bioelectronic data and related devices commonly used in patient health assessment, as suggested by Zanin [p.1, ¶3] and Cha et al. [p.136, ¶ 3and 4], since these variations are predictable to one of ordinary skill in the art. For these reasons, the instant claims do not recite any new element or new function or unpredictable result.

Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lefesvre et al. in view of Winkel, in view of Adrion et al., in view of Zanin et al., and in view of Cha et al., as applied to claims 33, 34, 36, 37, 38, 39, 40, and 43, above, and further in view of Tomoyasu (Applied And Environmental Microbiology, Jan. 1998, p. 376–382).

Lefesvre, Winkel, Adrion, Zanin, and Cha make obvious a method and system for managing batches of immunocompetent cells for deferred use, as set forth above.

Lefesvre, Winkel, Adrion, Zanin, and Cha do not teach a step for immunomagnetically selecting purified lymphocytes or monocytes, as in claim 42.

Tomoyasu teaches a method for immuno-magnetically separating cells using Dynabeads [Abstract].

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to have provided a predictable variation of the type of process used for separating cells, such as using immunomagnetics, in the system and method made obvious by Lefesvre, Winkel, Adrion, Zanin, and Cha, with a reasonable expectation of success, in view Tomoyasu who shows conventional methods of immunomagnetic separation of cells, as set forth above, and in view of the rationale for a *prima facie* case

of obviousness provided by the Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398 (2007). See MPEP 2143. In this case, the rationale would have been to explore methods for separating cells based on variations of known design incentives, such as using improved immunomagnetic techniques, as shown by Tomoyasu, since these variations are predictable to one of ordinary skill in the art. For these reasons, the instant claims do not recite any new element or new function or unpredictable result.

Claims 41 and 44-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lefesvre et al. in view of Winkel, in view of Adrion et al., in view of Zanin et al., in view of Cha et al., and in view of Tomoyasu, as applied to claims 33, 34, 36, 37, 38, 39, 40- 43, above, and further in view of Privitera et al. (US 4,826,760; Issued: May 2, 1989) and Barocci et al. (Transpl. Int., 1993, 6:29-33)

Lefesvre, Winkel, Adrion, Zanin, Cha, and Tomoyasu make obvious a system and method for managing batches of immunocompetent cells for deferred use, as set forth above. Lefesvre additionally teaches administering a vaccine to a patient via lymphatic injection [see p.2, ¶6], as in claim 46.

Lefesvre, Winkel, Adrion, Zanin, Cha, and Tomoyasu do not teach annihilating antibodies within immunocompetent cells prior to re-use, as in claims 41 and 47.

Lefesvre, Winkel, Adrion, Zanin, Cha, and Tomoyasu do not teach preparing an autologous vaccine using specific parameters of T4/T8 ratio, as in claims 44 and 48-54.

Lefesvre, Winkel, Adrion, Zanin, Cha, and Tomoyasu do not teach preparing a flu vaccine with cytotoxic activity, as in claim 45.

Barocci teaches methods for removing antibodies from sera [Abstract].

Privitera teaches methods for determining specific T4/T8 lymphocyte ratios for treating patients [see at least Col.1 and Col. 2], which is interpreted as an autologous vaccine. Suppressor/cytotoxic T cells bear the T8 antigen [Col. 2, ¶2], which shows cells with cytotoxic activity. Such ratios can assist in the treatment of a wide variety of disorders [Col. 2].

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to have removed antibodies from cells prior to injection, in the system and method made obvious by Lefesvre, Winkel, Adrion, Zanin, Cha, and Tomoyasu, with a reasonable expectation of success, since Barocci shows that experimental techniques for removing harmful antibodies from sera would have been predictable to one of ordinary skill in the art. The motivation would have been to improve quality control by ensuring that future patients are not given injections containing infected cells, as suggested by Lefesvre [see at least p.2, and p.4, ¶ 2],

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to have prepared specific parameters of a T4/T8 lymphocyte ratio, in the system and method made obvious by Lefesvre, Winkel, Adrion, Zanin, Cha, and Tomoyasu, with a reasonable expectation of success, since Lefesvre teaches methods for preparing and treating patients with lymphocytes, as set forth above, and since Privitera explicitly provides specific T4/T8 lymphocyte ratios for treatment, as set forth above. The motivation would have been to assist in the treatment of a wide variety of disorders, as suggested by Privitera [Col. 2].

It would have been obvious to one of ordinary skill in the art at the time of the instant invention to have prepared a vaccine with cytotoxic activity, in the system and method made obvious by Lefesvre, Winkel, Adrion, Zanin, Cha, and Tomoyasu, with a reasonable expectation of success, since Privitera shows that T cells have cytotoxic activity, as set forth above. The motivation would have been to assist in the treatment of a wide variety of disorders, as suggested by Privitera [Col. 2].

Response to Arguments

Applicant's arguments filed 05/12/2011, have been fully considered but are not persuasive for the following reasons.

In response to applicant's arguments on page(s) 21-23 that Winkel does not teach an expert system applied to the re-use of cells or processing of parameters of cell re-use protocols, applicant is arguing limitations that are not recited in the instant claims. The claims do not recite any positive process steps for performing "re-use" protocols (or processes). The claims require implementing (into an expert system) a process for determining a deferred-use protocol, and determining parameters of a deferred-use protocol. Lefesvre does not specifically teach implementing (into an expert system) deferred use protocols comprising biological and technical indications required for cell processing, as discussed above. However, Lefesvre suggests this limitation by teaching a **cellular re-use processing center** that implements deferred use protocols, such as defrosting immune-qualified cells collected from patients and re-using them by injecting them into as patients as therapeutic treatment [p. 2, ¶6, ¶8], which is a technical indication required for processing. Therefore, Lefesvre makes obvious

implementing deferred use protocol comprising biological and technical indications required for cell processing into an expert system.

Lefesvre also does not specifically teach an expert system for determining parameters for deferred use protocols using data stored in a database, as discussed above. However, Lefesvre suggests this limitation because the processing center for managing cellular and personal data requires transferring data and **parameters** associated with all of the stored information, which includes batch data collected at the time of re-use [p.4, ¶4, ¶6].

In response to applicant's arguments, on page(s) 23-24, that Adrion does not teach determining parameters of deferred-use protocol including optimal proportions of various selected cell types using immunity data, Adrion teaches means for ascertaining a clinically important interval (CII) combination of different cells, as discussed above, which meets the claim language for "optimized proportions" of cells because the term "optimized" is subjective language and the specification does not provide any objective standard that defines the scope of "optimized proportions" of cell types. Furthermore, Adrion was not relied upon as a teaching for ratios. Privitera teaches methods for determining specific T4/T8 lymphocyte ratios for treating patients [see at least Col.1 and Col. 2].

It is noted that applicant's arguments, on page 24, have not addressed the teachings of Lefesvre, Zanin et al., Cha et al., Tomoyasu, Privitera et al., and Barocci et al., but merely focus on the asserted deficiencies of Winkel and Adrion, which have been addressed and are not persuasive for the reasons set forth above.

Therefore, the examiner maintains that all the elements of Applicant's invention with respect to the specified claims are instantly disclosed or fully envisioned by the combination of references cited above.

Response to Declaration

Applicant's arguments, filed 05/12/2011, on page 24, that it would not have been obvious to one of ordinary skill in the art to combine the above references in view of the Declaration filed 05/12/2011 by Professor Dominique Charron, under 37 CFR 1.132, has been fully considered. However, the declaration is insufficient to overcome the rejections of record under 35 U.S.C. 103(a) over the combination of Lefesvre et al., Winkel, Adrion, Zanin et al., Cha et al., Tomoyasu, Privitera et al., and Barocci et al., for the following reasons:

The Declaration does not refer to any of individual claims of the instant application. Thus, there is no showing that the objective evidence of nonobviousness is commensurate in scope with the claims. See MPEP § 716.

The Declaration asserts that it was not obvious to determine and define parameters for deferred uses for stored immune-competent cells of a healthy individual because: (1) parameters to define or trigger a re-infusion of immuno-competent cells were not available, and (2) parameters "supporting the need for storage" (e.g. longitudinal parameters) were known as medical parameters but were not linked to information required for stored cells of healthy patients. With regards to (1), the instant claims do not recite "parameters to define or trigger a re-infusion of immuno-competent

cells", but instead recites a step of determining parameters of a deferred-use protocol (see claim 33). Thus, there is no showing that the objective evidence of nonobviousness is commensurate in scope with the claims. See MPEP § 716. With regards to (2), it is unclear what aspect of the instant claims Professor Charron is arguing. The claims do not recite parameters "supporting the need for storage". Furthermore, Professor Charron's argument is confusing because he also admits for the record that such parameters, e.g. longitudinal immune data of healthy patients, were known as medical parameters but were not linked to information required for stored cells of healthy patients. Therefore the Declaration does not provide support for a nexus between the claimed invention and surprising or unexpected results. In addition, there is no evidence that if persons skilled in the art who were presumably working on the problem knew of the teachings of the above cited references, they would still be unable to solve the problem. See MPEP § 716.04.

In view of the foregoing, when all of the evidence is considered, the totality of the rebuttal evidence of nonobviousness fails to outweigh the evidence of obviousness.

Conclusion

No claims are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pablo Whaley whose telephone number is (571)272-4425. The examiner can normally be reached between 11am-7pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marjorie Moran can be reached at 571-272-0720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Examiner, Art Unit 1631

/Marjorie Moran/
Supervisory Patent Examiner, Art Unit 1631